

Before  
The Public Service Commission  
of  
South Carolina

Docket No. 2017-13-A  
(Year 2017 - 2018 Proceeding)

DIRECT TESTIMONY  
of  
**BENJAMIN S. SMITH**  
for  
Chem-Nuclear Systems, LLC

**Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

- A. My name is Benjamin S. Smith. My business address is 740 Osborn Road, Barnwell, South Carolina. I am employed by Chem-Nuclear Systems, LLC (CNS), a wholly-owned subsidiary of Duratek, Inc which is, in turn, a wholly-owned subsidiary of EnergySolutions, LLC. As Director, Barnwell Disposal Operations, I am responsible for the safe and proper disposal of low level radioactive waste received at the disposal facility in accordance with the company's South Carolina Radioactive Material License. I am also responsible for management, supervision and administration of disposal operations personnel, equipment and buildings.

**Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.**

- A. I have a Bachelor of Science degree in Geological Engineering from Washington State University, Pullman, Washington, and a Masters of Engineering in Civil Engineering from the University of South Carolina. I am a Registered Professional Engineer in South Carolina and Colorado, and a Registered Professional Geologist in South Carolina and Washington. I am also certified as a Hazardous Materials Manager, and in South Carolina I have been certified as a Ground Water Well Driller. I have over 30 years of experience at the Barnwell Disposal Facility in various positions starting as a Geotechnical Engineer, progressing to Senior Project Engineer involved in design and construction management on the site, regulatory compliance, financial management of the Institutional Costs Programs, and program management for large component projects, Phase I decommissioning activities, and other special projects at the disposal site. I have been employed with CNS since 1986, and assumed my present position in August of 2017.

**Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY BEFORE THE PUBLIC SERVICE COMMISSION?**

A. No. This will be my first time testifying before the Public Service Commission.

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. My testimony will provide information to the Commission about the disposal site operations relative to disposal of low level radioactive waste at the disposal facility located in Barnwell County, South Carolina. I will provide a brief background on the general process that has been used in this proceeding for identifying the allowable costs associated with our low level radioactive waste disposal business. I have included an Amended Application for identification of allowable costs as an exhibit to my testimony. My testimony will be based on the Amended Application instead of the Original Application filed in September of 2017. The Amended Application, including Amended Exhibits A, B, and C, reflects the changes we agreed to as a result of the Office of Regulatory Staff's annual audit of our allowable costs.

My testimony will also focus on the principal differences in categories of costs between costs we actually incurred in Fiscal Year 2016-2017 and the estimated costs identified in Commission Order 2017-378. Finally, my testimony will summarize the costs we are requesting the Commission to identify as allowable for Fiscal Year 2017-2018 as shown in Amended Exhibit C.

**Q. PLEASE DESCRIBE THE DISPOSAL SITE.**

A. Chem-Nuclear (CNS) operates a low level radioactive waste (LLRW) disposal facility located approximately five miles west of the City of Barnwell in Barnwell County, South Carolina. The closest municipality to the disposal site is the Town of Snelling. CNS has

operated the disposal site since 1971 continuously with no interruptions or regulatory shutdowns. We are proud of our exemplary safety and compliance record.

The disposal site comprises approximately 235 acres of property owned by the State of South Carolina and leased by CNS from the State. The 235-acre licensed disposal area is divided into different use categories including active trenches, completed trenches, potential trench areas, and ancillary facility, water management and buffer zone areas. Approximately 120 of the 235 acres are completed trenches with enhanced (multi-layer or geo-textile) caps installed. The disposal site could not be operated successfully without an experienced and talented group of employees. They are critically important to the safe and compliant operation of the disposal site. Many of CNS' employees at the disposal site have been with the company for twenty years or more. Attracting and retaining high quality, well-motivated personnel is an integral part of successful, safe and compliant disposal of LLRW.

**Q. PLEASE DESCRIBE THE DISPOSAL SITE OPERATIONS IN FISCAL YEAR 2016-2017, INCLUDING CHANGES FROM PREVIOUS YEARS' OPERATIONS.**

- A. We continue to operate as an in-compact disposal site, accepting waste from the Atlantic Compact states of South Carolina, New Jersey, and Connecticut only.

**Q. PLEASE DESCRIBE BRIEFLY THE STATUTORY AND REGULATORY BACKGROUND FOR CHEM-NUCLEAR'S AMENDED APPLICATION THAT IS THE SUBJECT OF THIS HEARING.**

- A. This is the seventeenth hearing conducted by the Commission in this docket to fulfill its responsibilities under the "Atlantic Interstate Low level Radioactive Waste Compact Implementation Act" of 2000. As required by the Act, the Commission has held formal proceedings annually and published orders after hearings in this docket by which the

Commission has identified Chem-Nuclear's "allowable costs". By that determination, as provided by the Act, Chem-Nuclear is able to recover costs it incurs for operations in the disposal of low level radioactive waste at its Barnwell site.

Over the previous sixteen hearings, and, as the Commission's orders demonstrate, the Commission has relied on the evidence to make numerous determinations with respect to which of our costs are to be properly considered as "allowable," and the Commission has consistently refined its decisions on the issues. As a consequence, many of the issues that the parties and the Commission addressed in previous proceedings have been resolved and the orders represent the precedents upon which we have relied in preparing our Amended Application and evidence in this case.

**Q. PLEASE EXPLAIN THE GENERAL CONCEPT THAT CHEM-NUCLEAR'S AMENDED APPLICATION AND EVIDENCE EMBODY IN THIS PROCEEDING.**

- A. Our Amended Application and our evidence in this case represent a similar approach to what has been used in previous proceedings. That approach incorporates the separation of costs into the three categories that were identified in the Collaborative Review of Chem-Nuclear's Operations and Efficiency Plan that the Commission approved and which the Commission has directed Chem-Nuclear to use by previous orders in this Docket. Those three categories are fixed costs, variable costs and irregular costs. Our Amended Application and evidence for Fiscal Year 2016-2017 also reflects the full use of the accounting system the Commission approved in Order 2011-388. That accounting system enables us to capture and track the separated costs as we incur them and incorporate the data effectively in our internal monthly data reports and in our amended exhibits to the Amended Application and our evidence.

The actual data collected in the three cost categories for Fiscal Year 2016-2017 provide information to adjust the projected costs the Commission identified as allowable in Commission Order 2017-378 to reflect actual operations experience.

**Q. PLEASE DESCRIBE THE MANNER IN WHICH CHEM-NUCLEAR TREATS “ALLOWABLE COSTS” UNDER THE REGULATORY PROCESS ESTABLISHED BY THE ACT?**

- A. Chem-Nuclear’s method for seeking adjustments to the costs identified by the Commission in its orders is different from the regulatory treatment of other regulated entities. First of all, the Act does not provide for the Commission to determine our revenue requirements, including rate of return, based on a test year, and fix our rates or charges to enable Chem-Nuclear to recover its revenue requirements. The Act empowers the Commission to identify our “allowable costs,” and we deduct this total (including a statutory margin applied on some costs) from the annual amount paid by the generators.

At the end of each fiscal year, we compare the costs we actually incur to operate the site to the costs previously identified as allowable in the Commission’s order for that year. We only use the actual costs incurred as the amount that we request the Commission to identify as allowable in the following proceeding. That means that if we do not actually spend as much as the Commission has allowed for a particular cost category, then we only use the actual amount spent in determining the allowable cost for Chem-Nuclear at the end of the year. If we were to spend more than the identified amount, we apply to the Commission to recover the extra cost in the subsequent fiscal year. Chem-Nuclear sometimes carries costs for a year or more until the Commission rules on our application to recover them.

**Q. PLEASE EXPLAIN HOW THE PROCESS WORKS BY USE OF AN EXAMPLE.**

- A. Vault cost recovery is a good illustration of the method. Each year the Commission determines variable vault cost rates for standard disposal vaults that are dependent on the number of cubic feet of waste in four classifications received at the site (Class A, Class B, Class C, and Slit Trench waste). That “variable vault cost rate” can be used to forecast the vault costs in the next year, based on the volume of waste received in each category. However, it is difficult to predict accurately by waste classification the volume and mix of waste that will be received in any given year. Therefore, the variable vault cost rate will sometimes forecast a dollar amount for vault costs that is in excess of the actual amount spent. In such cases, the actual amount spent to procure concrete disposal vaults is used to determine Chem-Nuclear’s cost recovery and fee, not the higher amount forecast by the variable vault cost rate. If the situation were reversed, that is, if the vault costs exceeded the level previously identified by the Commission, Chem-Nuclear would seek to recover the additional amount that we actually spent as part of the application for allowable cost recovery in the next year’s Commission proceeding.

**Q. PLEASE EXPLAIN HOW THE ALLOWABLE PORTION OF CORPORATE GENERAL AND ADMINISTRATIVE (G&A) COSTS IS DETERMINED.**

- A. There are three components to the Corporate G&A Costs identified in our Amended Application. These components and their respective allocation methods are: Corporate SG&A (total cost basis), Corporate Information Systems (IS) allocation (based on a “head count” or the number of employees assigned to each business unit), and Columbia SG&A allocation (based on the number of disposal site personnel located in the company’s Columbia, SC offices). The Office of Regulatory Staff again conducted a detailed audit of

the pool of costs that formed the basis for CNS' G&A allocation to identify costs that were allowable and costs that were unallowable under the statute.

**Q. WHAT ALLOWABLE COSTS ARE INCLUDED IN G&A?**

- A. Corporate SG&A costs are allocated to each business unit on a total cost basis. The pool of costs that forms the basis for the Corporate SG&A Allocation includes costs for Corporate Executive Management and Support, Contracts and Finance, Contracts Legal Support, Human Resources Corporate Support, Accounting Corporate Support, and Regulatory Affairs and Environmental, Safety, Health, Quality Assurance, and Security Corporate Support.

The Corporate IS costs are allocated based on the "head count" or number of employees assigned to each business unit. Columbia SG&A costs are allocated to business units based on the number of each respective business unit's employees located in the company's Columbia, SC office. The total allowable Corporate G&A allocation for Fiscal Year 2016-2017 is \$868,700, as shown in **Amended Exhibit A**.

**Q. PLEASE DESCRIBE THE ALLOWABLE COSTS INCURRED IN FISCAL YEAR 2016-2017 AND COMPARE THOSE COSTS TO THE AMOUNTS IDENTIFIED IN COMMISSION ORDER 2017-378.**

- A. This part of my testimony will focus on the principal differences in categories of costs between actual costs incurred in Fiscal Year 2016-2017 and the costs identified in Commission Order No. 2017-378.

**Fixed Costs**

Actual Fixed Costs incurred in Fiscal Year 2016-2017 were \$130,461 more than the Fixed Costs identified in Commission Order No. 2017-378. This was primarily due to an increase in Corporate Allocation (G&A) due to EnergySolutions selling one of its business

units in 2016. With one less business unit to divide up the total Corporate G&A, each remaining business unit was allotted its respective portion of the allocation that would have been paid by that sold off business unit. In the Original Application, Chem-Nuclear proposed an additional \$121,051 in Corporate Allocation. When the ORS performed their annual audit, they allowed an additional \$9,410, bringing the total adjustment to \$130,461. Therefore, Chem-Nuclear requests an adjustment of \$130,461 in Fixed Costs as shown on Amended Exhibit A.

### **Variable Costs**

Variable Costs consist of two parts. I will discuss Variable Labor and Non-Labor Costs and then Variable Material Costs for the concrete disposal vaults (Variable Vault Costs).

### **Variable Labor and Non-Labor Costs**

The actual Variable Labor and Non-Labor costs experienced in the disposal of waste in Fiscal Year 2016-2017 resulted in a Total Variable Labor and Non-Labor Cost of \$152,918. The actual Variable Labor and Non-labor costs experienced in Fiscal Year 2016-2017 is \$37,390 more than the amount that would have been anticipated based on rates provided in Commission Order No. 2017-378. Chem-Nuclear requests an adjustment of \$37,390 in this category of costs. This amount of adjustment proposed in the Amended Application is the same as was requested in the Original Application.

### **Variable Material (Vault) Costs**

The amount of actual Variable Material (Vault) Costs incurred in Fiscal Year 2016-2017 for standard disposal vaults was \$272,929. This amount is \$34,290 less than the amount calculated using rates identified in Commission Order No. 2017-378. Chem-Nuclear requested no adjustment in this category of costs in the Original Application, and no adjustment in this category of costs in the Amended Application.

### **Irregular Costs**

Not all Irregular Costs for the year are known at the time a Commission order is issued. Irregular Costs are costs incurred for projects that may not occur each year or projects that occur each year but with varying costs. Each year Irregular Cost projects with varying costs include trench construction, site engineering and drawing updates, and other site construction projects. Examples of projects that may not recur each year are large component disposal, license renewal proceedings and hearings. Total Irregular Costs incurred for Fiscal Year 2016-2017 were \$437,635 compared to the amount identified in Commission Order No. 2017-378 of \$407,320. Therefore, Chem-Nuclear seeks an adjustment of \$30,315 in Irregular Costs. This amount is \$1.00 more than the amount requested in the Original Application.

**Q. PLEASE DESCRIBE THE COSTS PROPOSED FOR FISCAL YEAR 2017-2018.**

- A.** The costs proposed for Fiscal Year 2017-2018 are summarized in **Amended Exhibit C**. Disposal operations in Fiscal Year 2017-2018 will continue to reflect smaller routine volume disposal site operations because the disposal site will continue to accept only waste from the three Atlantic Compact states.

### **Proposed Fixed Costs**

For Fiscal Year 2017-2018, we propose \$3,453,419 in total Fixed Costs as shown on Amended Exhibit C in the Application. The Original Application proposed \$3,665,007 in total Fixed Costs, which was a slight increase in this cost category for FY2017-2018. As a result of the ORS audit, which reviewed actual costs from July 1 through December 31, 2017, and projected costs for the remainder of the fiscal year, this amount was adjusted down to the \$3,453,419 proposed in the Amended Application.

**Proposed Irregular Costs**

As discussed earlier, not all irregular costs were known at the time the application was submitted. The Irregular Costs identified in Amended Exhibit C are based on projected costs incurred during the first half of Fiscal Year 2017-2018 and activities expected in the second half of the Fiscal Year. A total of \$570,000 in various irregular project costs was summarized in Exhibit C to our Original Application. The Amended Application proposes a total of \$532,367 in Irregular Costs as shown on Amended Exhibit C.

The Amended Exhibit C proposes \$210,000 as an Irregular Cost for Trench Construction. Work on Trench 100 began in February of this year, and wrapped up with inspections the first full week of March. The amounts proposed for License Appeal, Trench Software, and Site Maintenance are to cover anticipated costs. For Security Upgrades the Amended Application proposes \$10,000. This amount is primarily to cover the cost of construction work in the security area to improve security controls at the main gate.

Amended Exhibit C also includes costs for Large Component Disposal in the Irregular Costs Category for FY 2017-2018. A large component arrived at the disposal site on June 30, 2017, which was therefore FY 2016-2017 waste volume. The majority of the costs associated with the large component's disposal were incurred in July, which made them FY 2017-2018 costs.

**Proposed Variable Labor and Non-Labor Cost Rates**

The variable labor and non-labor cost rates proposed for Fiscal Year 2017-2018 are based on actual experience during Fiscal Year 2016-2017 and then inflated by 3%

**Proposed Variable Material (Vault) Cost Rates**

The vault cost rates proposed in Amended Exhibit C are based on actual experience during Fiscal Year 2016-2017 and then inflated by 3%. The amounts shown on Amended Exhibit C for Variable Material Cost Rates (Vaults) are the same as those shown on Exhibit C of the Original Application.

**Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?**

**A.** Yes it does.